REMARKS/ARGUMENTS

Status of the Claims

Claims 1 and 3-25 are pending. Of these, Claims 14-25 are withdrawn from consideration.

Objection to the Specification

Pursuant to Examiner's request, Applicants submit the foregoing claim amendments reproducing the content of Claim 11 within the body of the specification. Withdrawal of this objection is respectfully requested.

Response to Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 4 and 10-12 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite due to the alleged absence of a definition for the term "amplifier moiety." Applicants respectfully disagree and direct Examiner's attention to paragraphs [0087]-[0088] of the specification, which provide:

> *An amplifying moiety conjugates multiple copies of the toxin to a single site on an antibody.... The "amplifier" is a multifunctional group or backbone providing a multitude of attachment sites for spacer groups, toxins or spacer-group-toxin conjugates.... The amplifier is sufficiently functionalized to permit attachment thereto of a multitude of spacer groups, through covalent linkages. Examples of amplifiers include poly(amino acids), polysaccharides, dendrimers, and derivatized analogs of these groups of compounds, and polymers in general.*

As such, Applicants believe the metes and bounds of the term "amplifier moiety" are clearly ascertained from the present disclosure. Withdrawal of this rejection is respectfully requested.

Unsearchable Subject Matter

Although no grounds were provided in the April 29th, 2008 Office Action for a finding of unsearchable subject matter in Claims 10-13, the Examiner has since cited a lack of definition for the terms "L" and "A (amplifier moiety)" as the basis for this rejection. Applicants respectfully traverse to the extent that the rejection concerns "amplifier moiety" since the term is in fact defined in the specification. *See* paragraphs [0087]-[0088] of the specification and Applicants' remarks in the preceding section. To the extent that the rejection is based on the term "L," however, Applicants respectfully submit that the references to "L" were evidently made in error and apologize for any confusion generated

thereby. Appropriate amendments to Claims 10-12, rendering the rejection moot, are presently submitted. Withdrawal of this rejection is respectfully requested.

Response to Rejections Under 35 U.S.C. § 112, First Paragraph

Claims 1 and 3-13 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, the Examiner opines that the specification fails to adequately describe the binding specificity associated with any antibody for the claimed compound. It is also alleged that the specification does not "adequately describe the common structural attribute, *i.e.* intact glycosyl linking group, other than the O-linked glycosylation site for an attachment of one sugar."

Pursuant to 35 USC 112, first paragraph, "a specification shall contain a written description of the invention." In ascertaining what this requirement truly demands of Applicants, it is instructive to observe both the procedures and policies associated therewith. Procedurally, "[w]henever the issue arises, the fundamental factual inquiry [underlying a written description determination] is whether the specification conveys with reasonable clarity to those skilled in the art that ... applicant was in possession of the invention as now claimed." *See* MPEP 2163.02. This procedure is a tool to implement the underlying policies, that is: to clearly convey the information that an applicant has invented the subject matter which is claimed; to implement the principle that a patent must describe the technology that is sought to be patented; to satisfy the inventor's obligation to disclose the technologic knowledge upon which the patent is based; and to promote the progress of the useful arts by ensuring that inventors adequately describe their inventions in exchange for rights of exclusivity.

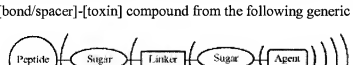
Pursuant to the USPTO's own Written Description Training Materials (Revision 1 – March 25, 2008), "it does not appear that persons of skill in the art consider knowledge of the amino acid sequence of the variable regions critical for purposes of assessing possession of an antibody." Moreover, the present invention is not directed to a particular antibody. As the claims suggest, the invention is directed to a compound represented by the formula Ab-G-L-T, wherein Ab is covalently linked to L, and ultimately the toxin, through an intact glycosyl linking group. This unique manner of conjugation operates independent of and is not restricted to any particular antibody specificity. To dispel any confusion, Applicants wish to clarify that the intact glycosyl linking group is a separate moiety from the antibody portion of the claimed compound. Furthermore, the specification offers support for the inclusion of O-linked and/or N-linked glycosylation sites in the antibody amino acid sequence. *See* [0162] of the specification. As those of ordinary skill in the art will recognize and as exemplified in FIGs. 1-9, O-

linked and N-linked glycosylation sites can be the points of attachment for either glycan chains *or* single sugar molecules. Armed with the present disclosure, those of ordinary skill in the art can readily appreciate what is encompassed by an "intact glycosyl linking group" and recognize what the applicant was in possession of. *See* [0051] of the specification. In view of the foregoing, Applicants respectfully submit that the written description requirement is satisfied for the pending claims. Withdrawal of the rejection is respectfully requested.

Response to Rejections Under 35 U.S.C. § 102

Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by Leung, *et al.* In the Office Action, it is stated that Leung *et al.* teaches the compound Ab-G-L-T, wherein G is an intact glycosyl linking group covalently joining Ab to L. Applicants respectfully disagree. The term "intact glycosyl linking group," as used in the present disclosure, "refers to a linking group that is derived from a glycosyl moiety in which the saccharide monomer that links the modifying group and to the remainder of the conjugate is ***not degraded***, e.g. oxidized, e.g., by sodium metaperiodate to create a locus of attachment for the modifying group." *See* [0051] of the specification. Quite the opposite, Leung *et al.* teaches a carbohydrate modification technique which oxidizes, *i.e.* degrades, the divalent Ab fragment with aqueous sodium periodate. *See* the Carbohydrate modification section, Col. 2, pg. 5920 of Leung *et al.* As such, Leung *et al.* does not anticipate the present claims and withdrawal of this rejection is respectfully requested.

Claims 1 and 3-9 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Pat. No. 7,125,843 (DeFrees *et al.*). In order for a general chemical formula to anticipate a claimed species, the species must be "at once envisaged" from the formula. *See* MPEP 2131.02. The Office Action has not pointed to any portion of DeFrees *et al.* disclosing the formula Ab-G-L-T nor has the Examiner shown how one of ordinary skill in the art could immediately envisage an [antibody]-[intact glycosyl linking group]-[bond/spacer]-[toxin] compound from the following generic structure in U.S. 7,125,843:



In view of the above, Claims 1 and 3-9 are not properly rejected on a novelty basis and withdrawal of this rejection is respectfully requested.

Claims 1, 3-4, 7 and 9 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Pat. No. 6,743,896 (Filpula *et al.*). In particular, Filpula *et al.* teaches an indirect method of attaching a toxin to an antibody (SCA) through a carrier polymer and a method of directly attaching a diagnostic or therapeutic agent to the glycosylated SCA. Both methods, however, require oxidation, *i.e.* degradation, of an antibody carbohydrate component and would not yield an "intact glycosyl linking group" as recited in the present claims. *See* lines 20-31, Col. 29 of Filpula *et al.* As such, the present claims are not anticipated by Filpula *et al.* and withdrawal of this rejection is therefore respectfully requested.

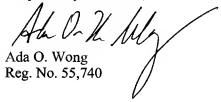
Claims 4-9 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5, 635,603 (Hansen *et al.*). To clarify, Hansen's method involves oxidizing the carbohydrate portion of an antibody component. Oxidation (or degradation) of the carbohydrate creates aldehyde carbonyl groups or ketone carbonyl groups that are free to react with the amine groups of, *e.g.* toxin carrier molecules, to form a conjugate. *See* lines 46-57, Col. 15 of Hansen *et al.* It should be noted that oxidation with $NaIO_4$, otherwise known as sodium periodate, degrades the carbohydrate and does not form the intact glycosyl linking group of the present invention. As such, the present claims are not anticipated by Hansen and withdrawal of this rejection is respectfully requested.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-442-1000.

Respectfully submitted,



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